

# How To Monitor Hosts Using the NRPE Wizard in Nagios XI 2024

## Purpose

This document describes how to monitor hosts with Nagios XI by using the Nagios Remote Plugin Executor (NRPE) and the NRPE configuration wizard. The NRPE wizard allows for custom NRPE configurations, compared to the Linux Server wizard it is more advanced.

## NRPE Overview

NRPE is a monitoring agent and protocol that is often used to monitor Linux and Unix machines with Nagios.

The NRPE add-on consists of two parts:

- The `check_nrpe` plugin that runs on the Nagios XI server
- The NRPE agent that runs on the remote Linux/Unix server, processes requests from the client, and returns status information back to Nagios XI

## NRPE Agent Installation

There are several methods commonly used for installing the NRPE agent on your hosts.

### Nagios XI Linux NRPE Agent

Nagios Enterprises provides a custom distribution of the NRPE agent and Nagios Plugins for Linux which greatly simplifies the steps involved to start monitoring your Linux machines. The agent is configured ready to be used with the Nagios XI Linux Server configuration wizard.

While this distribution of the agent is oriented towards the Linux Server configuration wizard it can also be used by the NRPE configuration wizard. The Linux Server configuration wizard is a much simpler wizard to use but does not allow as much customization as the NRPE configuration wizard provides. The following documentation is available for the Linux Server configuration wizard:

### Existing NRPE Installations

If you were previously using Nagios Core to monitor Linux/Unix machines, you likely have NRPE already installed and configured on these machines. Nagios XI can monitor these machines using your existing NRPE setup. You may need to update the required configuration files to allow your Nagios XI server to communicate, one of the following files will contain the required settings:

```
/etc/xinetd.d/nrpe  
/usr/local/nagios/etc/nrpe.cfg
```

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## NRPE Agent Configuration

When you run the NRPE configuration wizard, you will be required to provide the name of the NRPE commands (called "command directives") you want to be executed on the remote agent and arguments for those commands (if applicable).

Command directives will be defined in either the `/usr/local/nagios/etc/nrpe.cfg` file OR in any `.cfg` file in the `/usr/local/nagios/etc/nrpe/` directory.

### Static vs Dynamic Command Directives

Here are two similar command directives:

#### Static

This configuration example is included when you install NRPE from source:

```
command[check_total_procs]=/usr/local/nagios/libexec/check_procs -w 150 -c200
```

#### Dynamic

This configuration example is included when you install the Nagios XI Linux NRPE Agent:

```
command[check_procs]=/usr/local/nagios/libexec/check_procs $ARG1$
```

You can see that the same plugin is being used (`check_procs`) however the static example has the warning and critical thresholds defined whereas the dynamic example is using an argument that the Nagios XI server provides.

The following table shows the differences between the two methods:

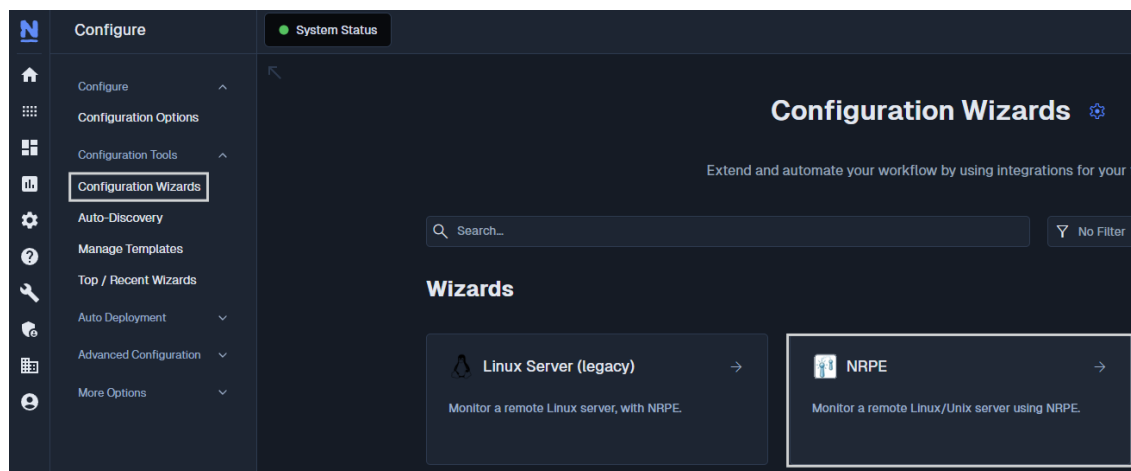
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Static	Dynamic
Command directives are absolute and require you to manually change them if required (such as changing thresholds)	Command directives can receive arguments from the Nagios XI server, allowing you to adjust arguments without touching the remote agent
Helps enforce monitoring standards	Allows for flexible monitoring configurations
Adds additional administrative overhead if not used in conjunction with a change control system	Less administrative overhead when changes are required
Less chance of being compromised by an exploit	Could be compromised by an exploit

The next step will demonstrate how these different methods can be used in the NRPE configuration wizard.

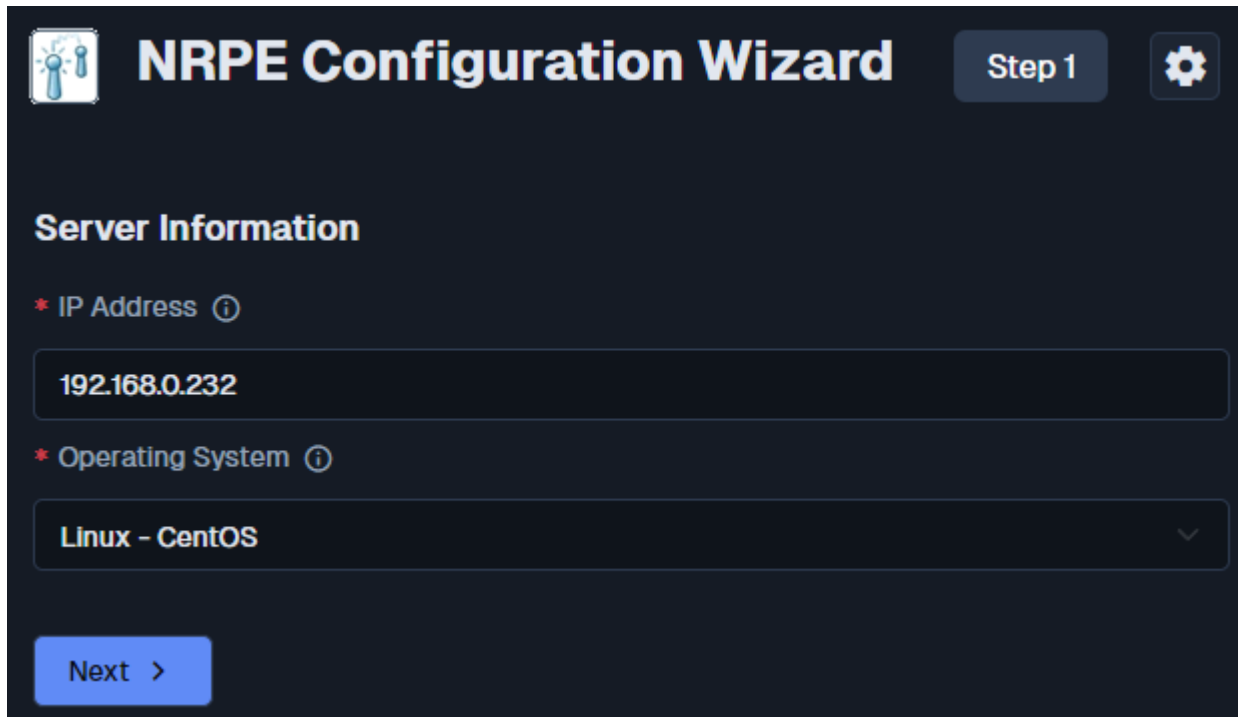
## Running The NRPE Configuration Wizard

1. To begin using the NRPE wizard navigate via the top menu bar to **Configure > Run** a configuring wizard and select the NRPE wizard (simply search for NRPE to quickly locate it).



2. On **Step 1** you will be asked to supply the address of the machine running the NRPE agent.
3. You will also have to select the **Operating System**; in this case it is CentOS.

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The screenshot shows the 'NRPE Configuration Wizard' interface. At the top left is a key icon, followed by the title 'NRPE Configuration Wizard'. To the right of the title is a 'Step 1' button and a gear icon. Below the title is the section 'Server Information'. It contains two required fields: 'IP Address' with the value '192.168.0.232' and 'Operating System' with the value 'Linux - CentOS'. A 'Next >' button is located at the bottom left of the form.

4. Click **Next** to progress to **Step 2**.

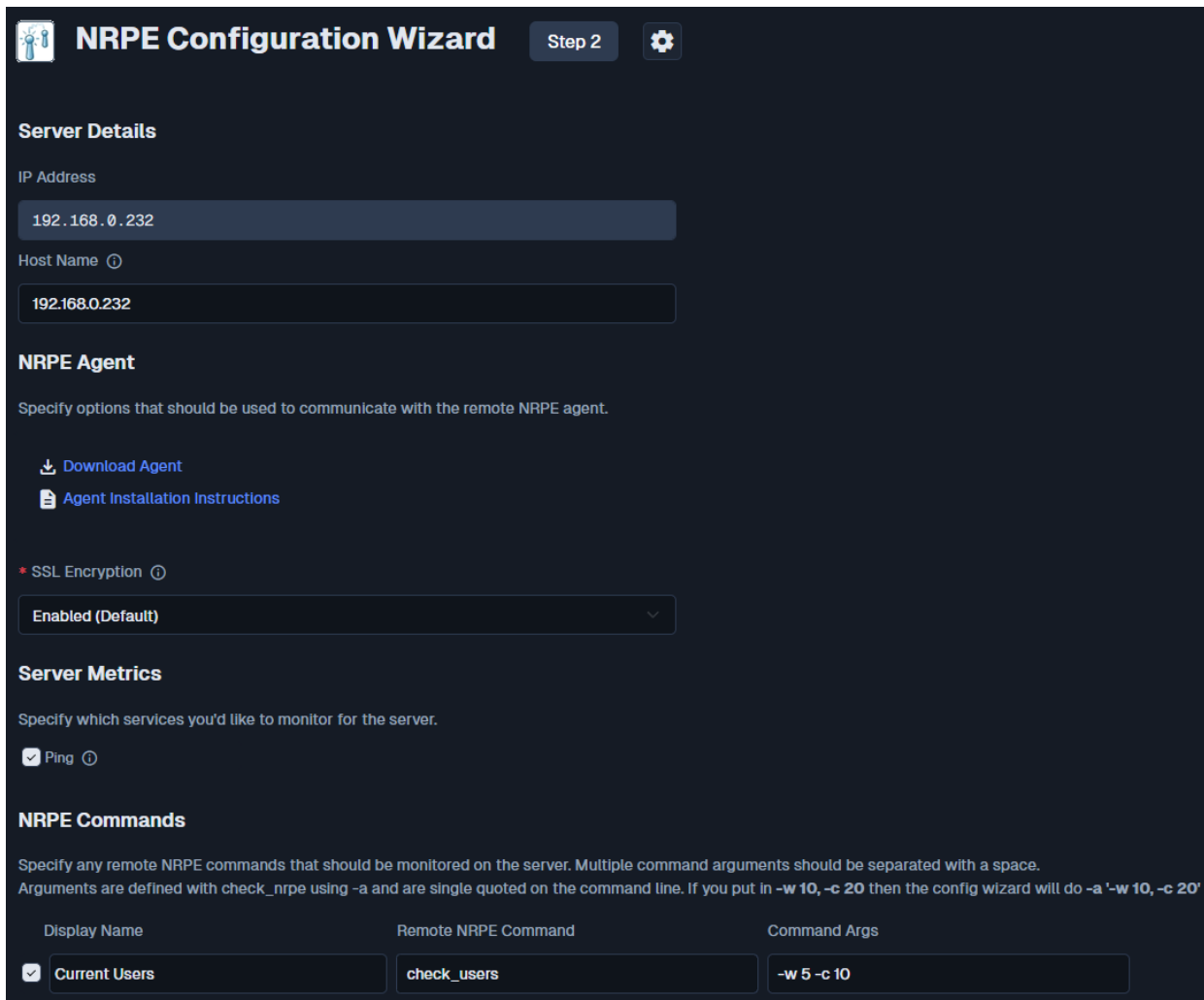
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5. On **Step 2** you will configure all the options for monitoring.

6. To start off with make sure a valid **Host Name** has been entered.

The **NRPE Agent** section can be ignored because you have already installed it.

Under Server Metrics you can see that I've un-checked the Ping box as I'm not interested in a ping service.



The screenshot shows the 'NRPE Configuration Wizard' at 'Step 2'. The interface is dark-themed and contains several sections:

- Server Details:** Includes fields for 'IP Address' (192.168.0.232) and 'Host Name' (192.168.0.232).
- NRPE Agent:** Includes a 'Download Agent' button, 'Agent Installation Instructions' link, and an 'SSL Encryption' dropdown menu set to 'Enabled (Default)'.
- Server Metrics:** Includes a 'Ping' checkbox which is unchecked.
- NRPE Commands:** Includes a table for defining commands to monitor.

Display Name	Remote NRPE Command	Command Args
<input checked="" type="checkbox"/> Current Users	check_users	-w 5 -c 10

The next section of **Step 2** discusses the NRPE commands.

Earlier in the documentation you were shown the difference between static and dynamic commands, these screenshots show how the wizard can be used for either method.

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## Static

**NRPE Commands**

Specify any remote NRPE commands that should be monitored on the server. Multiple command arguments should be separated with a space. Arguments are defined with check\_nrpe using -a and are single quoted on the command line. If you put in -w 10, -c 20 then the config wizard will do -a '-w 10, -c 20'

Display Name	Remote NRPE Command	Command Args
<input checked="" type="checkbox"/> Total Processes	check_total_procs	

As you can see above, only the Remote NRPE Command field needs to be populated as the arguments for this command directive as statically defined on the NRPE agent.

## Dynamic

In the dynamic example above, both the Remote NRPE Command and **Command Args** fields have been populated. You will notice that the arguments have been enclosed in single quotes as the remote command directive is configured to only accept one argument ( \$ARG1\$).

**NRPE Commands**

Specify any remote NRPE commands that should be monitored on the server. Multiple command arguments should be separated with a space. Arguments are defined with check\_nrpe using -a and are single quoted on the command line. If you put in -w 10, -c 20 then the config wizard will do -a '-w 10, -c 20'

Display Name	Remote NRPE Command	Command Args
<input checked="" type="checkbox"/> Total Processes	check_procs	-w 150 -c 250

7. Click **Next** and then complete the wizard by choosing the required options in **Step 3 – Step 5**.
8. To finish up, click on **Finish** in the final step of the wizard. This will create the new hosts with Total Processes service and begin monitoring.

Once the wizard applies the configuration, click the View status details for <your host> link to see the new service that was created. Regardless of which method is used above, the output is the same because they are executing the same commands on the NRPE host.

Host ↑	Status ↓	Duration ↓	Attempt ↓	Last Check ↓	Status Information ↓
CentOS9	Up	1d 5h 43m 24s	1/5	2024-12-07 19:26:36	OK - 192.168.0.232: rta 0.514ms lost 0%

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## More Information:

[Using Configuration Wizards](#)

## Finishing Up

This completes the documentation on monitoring hosts using NRPE in Nagios XI. If you have additional questions or other support-related questions, please visit us at our Nagios Support Forum, Nagios Knowledge Base, or Nagios Library:

[Visit Nagios Support Forum](#)

[Visit Nagios Knowledge Base](#)

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